

PATENT

Our Docket: P-LJ 4377

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Rajotte et al.

Serial No.: 09/676,475

Filed: September 29, 2000

For: METHODS FOR IDENTIFYING

LUNG HOMING MOLECULES

USING MEMBRANE DIPEPTIDASE

U.S. Patent and Trademark Office Box Sequence, P.O. Box 2327 Arlington, VA 22202

Examiner: M. Moran

Group Art Unit: 1631

CERTIFICATE OF MAILING BY "EXPRESS MAIL"

"EXPRESS MAIL" MAILING LABEL NUMBER: EL 857044059 US

DATE OF DEPOSIT: November 20, 2002

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Sir:

STATEMENT UNDER 37 C.F.R. § 1.821(f) and (q)

I hereby state that the content of the paper and computer readable copies of the Sequence Listing, submitted in accordance with 37 CFR § 1.821(c) and (e), respectively, are the same.

I hereby state that the submission, filed in accordance with 37 C.F.R. § 1.821(g) herein does not include new matter.

Respectfully submitted,

November 20, 2002

Date

Facsimile:

Registration No. 47, 956 (858) 535-9001 Telephone:

(858) 535-8949

CAMPBELL & FLORES LLP 4370 La Jolla Village Drive 7th Floor San Diego, California 92122 USPTO CUSTOMER NO. 23601



Document: Paper copy of sequence

listing, pages 1 through 113

Attorney Docket No: P-LJ 4377

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 RAW SEQUENCE LISTING
 DATE: 10/12/2000

 PATENT APPLICATION:
 US/09/676,475
 TIME: 18:27:53

Input Set : A:\LJ4377.app
Output Set: N:\CRF3\10122000\1676475.raw

```
3 <110 · APPLICANT: Ruoslahti, Erkki
          Pasqualini, Renata
          Rajotte, Daniel
  (12) - TITLE OF INVENTION: Methods of Identifying Lung Homing Molecules Using Membrane Dipeptidase
1) -: 130 - FILE REFERENCE: P-LA 4377
12 <140> CURRENT APPLICATION NUMBER: US/09/676,475
13 <141> CURRENT FILING DATE: 2000-09-29
13 (150 - PRIOR APPLICATION NUMBER: 09/042,107
16 15. PRIOR FILING DATE: 1998-03-13
13 150 NUMBER OF SEQ ID NOS: 452
20 170 - SOFTWARE: PatentIn Ver. 2.0
22 210 - SEQ ID NO: 1
23 - 211 LENGTH: 13
24 212 TYPE: PRT
25 -213 ORGANISM: Artificial Sequence
   -220 - FEATURE:
28 223 OTHER INFORMATION: Description of Artificial Sequence: Synthetic
30 - 100 - SEQUENCE: 1
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35 - 310 - SEQ ID NO: 2
  211. LENGTH: 8
37 - 312 - TYPE: PRT
38 - 213 ORGANISM: Artificial Sequence
40 - 120 - FEATURE:
41 \pm 23 OTHER INFORMATION: Description of Artificial Sequence: Synthetic 43 \pm 400 SEQUENCE: 2
44~{\rm Gys} Gly Phe Glu Leu Glu Thr Cys
4.5
48 210: SEQ ID NO: 3
   111 LENGTH: 13
49
50 + 212: TYPE: PRT
51 213. ORGANISM: Artificial Sequence
5.3
    220: FEATURE:
54 123: OTHER INFORMATION: Description of Artificial Sequence: Synthetic
56 400: SEQUENCE: 3
57 Cys Val Ala Leu Cys Arg Glu Ala Cys Gly Glu Gly Cys
58
61 - 110: SEQ ID NO: 4
62 - 111: LENGTH: 9
63 <212. TYPE: PRT
64 <113> ORGANISM: Artificial Sequence
66 <120> FEATURE:
67 <223 OTHER INFORMATION: Description of Artificial Sequence: Synthetic
69 <400> SEQUENCE: 4
70 Ser Trp Cys Glu Pro Gly Trp Cys Arg
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Input Set : A:\LJ4377.app

Output Set: N:\CRF3\10122000\I676475.raw

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75 311 LENGTH: 9
76 <212 TYPE: PRT
77 \times 213 + ORGANISM: Artificial Sequence
79 - 220 - FEATURE:
80 \sim\!223 OTHER INFORMATION: Description of Artificial Sequence: Synthetic
82 + 100 = SEQUENCE: 5
83 Cys Ser Cys Phe Arg Asp Val Cys Cys
84 1
87 210 SEQ ID NO: 6
88 <211> LENGTH: 9
89 - 212 - TYPE: PRT
90 - 213 - ORGANISM: Artificial Sequence
92 - 220 - FEATURE:
93 - 223 - OTHER INFORMATION: Description of Artificial Sequence: Synthetic
95 - 400 - SEQUENCE 6
96 Cys Arg Asp Val Val Ser Val Ile Cys
97
190 :310> SEQ ID NO: 7
191 :311: LENGTH: 7
102 (213 + TYPE: PRT
103 313 · ORGANISM: Artificial Sequence
105 - 220 - FEATURE
106 < 223 \le \text{OTHER INFORMATION: Description of Artificial Sequence: Synthetic}
108 -: 400 - SEQUENCE: 7
109 Leu Ser Pro Pro Tyr Met Trp
110
113 -: 210 - SEQ ID NO: 8
114 - 111 - LENGTH: 8
115 -: 212 - TYPE: PRT
116 - 213 - ORGANISM: Artificial Sequence
118 :020. FEATURE
119 (223) OTHER INFORMATION: Description of Artificial Sequence: Synthetic
121 :400. SEQUENCE: 8
122 Sig Tie Gly Glu Val Glu Val Cys
123
126 (210) SEQ ID NO: 9
127 (211) LENGTH: 7
128 (212) TYPE: PRT
129 (213) ORGANISM: Artificial Sequence 131 (220) FEATURE
132 \%23\% OTHER INFORMATION: Description of Artificial Sequence: Synthetic 134 \%400\% SEQUENCE: 9
135 Tyr Ser Gly Lys Trp Gly Lys
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139 (210) SEQ ID NO: 10
140 (211) LENGTH: 7
141 <\!\!<\!\!212\!\!> \texttt{TYPE: PET}
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 DATE: 10/12/2000

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 DATE: 10/12/2000

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Input Set : A:\LJ4377.app

Output Set: N:\CRF3\10122000\1676475.raw

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145 <223 - OTHER INFORMATION: Description of Artificial Sequence: Synthetic
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152 -: 210 - SEQ ID NO: 11
153 -: 211 - LENGTH: 7
154 -: 212 - TYPE: PRT
155 <213> ORGANISM: Artificial Sequence
157 -: 220 - FEATURE:
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160 :100> SEQUENCE: 11
161 Arg Val Gly Leu Val Ala Arg
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165 - 210 - SEQ ID NO: 12
166 - 211 - LENGTH: 7
167 :212 - TYPE: PRT
168 - 013 - ORGANISM: Artificial Sequence
17) -: J20 - FEATURE:
171 < 223. OTHER INFORMATION: Description of Artificial Sequence: Synthetic
173 -: 400 - SEQUENCE: 12
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171 1 5
178 <210 - SEQ ID NO: 13
179 <211 - GENGTH: 9
180 -212 - TYPE: PRT
181 -213 - ORGANISM: Artificial Sequence
183 -: 220 - FEATURE:
186 -400 SEQUENCE: 13
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188
188 1 5
191 :::10 - 3EQ ID NO: 14
192 -: 211 - LENGTH: 8
193 -: 212 - TYPE: PRT
194 :213 - ORGANISM: Artificial Sequence
196 :220 - FEATURE:
19^{\circ} :(213)- OTHER INFORMATION: Description of Artificial Sequence: Synthetic 199 :(400)- SEQUENCE: 14
200 Cys Gly Glu Phe Lys Val Gly Cys
201
204 :210: SEQ ID NO: 15
205 -: 211: LENGTH: 8
200 ::212: TYFE: PRT 20" ::213: GRGANISM: Artificial Sequence
209 <220: FEATURE:
216 -(223) OTHER INFORMATION: Description of Artificial Sequence: Synthetic
212 -: 400: SEQUENCE: 15
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DATE: 10/12/2000

PATENT APPLICATION: US/09/676,475 TIME: 18:27:53 Input Set : A:\LJ4377.app Output Set: N:\CRF3\10122000\1676475.raw 213 Cys Thr Leu Arg Asp Arg Asn Cys 214 217 :210 - SEO ID NO: 16 218 <211 · LENGTH: 8 219 HD129 TYPE: PRT 320 - 3213 - ORGANISM: Artificial Sequence 322 <220 FEATURE: 223 - 223 - OTHER INFORMATION: Description of Artificial Sequence: Synthetic 225 -: 400 - SEQUENCE: 16 325 Cys Ile Gly Glu Val Glu Val Cys 227 230 <210> SEQ ID NO: 17 231 <211 - LENGTH: 23 232 -: 212 - TYPE PRT 233 - (213) ORGANISM: Artificial Sequence 135 - 120 - FEATURE: 236 - 221 - NAME/KEY: SITE 137 4222 - LOCATION: (1)..(10) 238 <223 OTHER INFORMATION: Xaa may be present or absent 24) :220 - FEATURE: 241 H2212 NAME, KEY: SITE 243 -: 221 + LOCATION: (14)..(23) 243 <223 - OTHER INFORMATION: Xaa may be present or absent. 245 HU20 - FEATURE: 246 <223 - OTHER INFORMATION: Description of Artificial Sequence: Synthetic 248 -: 100 - SEQUENCE: 17 , > 249 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Gly Phe Glu Xaa Xaa Xaa .50 1 5 10 >> 252 Xaa Xaa Xaa Xaa Xaa Xaa Xaa 253 20 250 +010 SEQ ID NO: 18 257 +(211 - LENGTH: 7 D58 :212 - TYPE. PRT D59 :212 ORGANISM: Artificial Sequence 261 -: 220 - FEATURE: 262 (223) OTHER INFORMATION: Description of Artificial Sequence: Synthetic 264 < 400: SEQUENCE: 18 265 Leu Cys Thr Ala Met Thr Glu 266 1 5 269 -:210:- SEQ ID NO: 19 270 -: 211.- LENGTH: 8 271 - 212 - TYPE: PRT 172 - 213: ORGANISM: Artificial Sequence 174 <220: FEATURE: 275 -(223)- OTHER INFORMATION: Description of Artificial Sequence: Synthetic 27° -(400)- SEQUENCE: 19 278 Gly Ile Ser Ala Leu Val Leu Ser 279 282 <210> SEQ ID NO: 20

RAW SEQUENCE LISTING

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Input Set : A:\LJ4377.app
                       Output Set: N:\CRF3\10122000\1676475.raw
      283 <211> LENGTH: 8
      284 <212 - TYPE: PRT
      285 <213 - ORGANISM: Artificial Sequence
      287 <220 + FEATURE:
      288 (223) OTHER INFORMATION: Description of Artificial Sequence: Synthetic
      290 -: 400 - SEQUENCE: 20
      291 Cys Gly Lys Arg Tyr Arg Asn Cys
      292
      295 :210. SEQ ID NO: 21
      296 KU11 - LENGTH: 7
      297 1212 - TYPE: PRT
      298 <213 - ORGANISM: Artificial Sequence
      300 :220 - FEATURE
      301 < 223 < OTHER INFORMATION: Description of Artificial Sequence: Synthetic
      303 (100 - SEQUENCE: 21
      304 Ser Met 3er Ile Ala Arg Leu
      305
      308 :210 - SEO ID NO: 22
      309 :211 · LENGTH: 7
      310 :312 - TYPE PRT
      311 313 · ORGANISM: Artificial Sequence
     313 -1220 - FEATURE:
     314 :323 - OTHER INFORMATION: Description of Artificial Sequence: Synthetic
     316 <400 - SEQUENCE: 22
     31^{\prime\prime} Val Ser Phe Leu Glu Tyr Arg
     318 1 5
301 <010 - SEQ ID NO: 23
300 <011 - LENGTH: 9
     323 HD12 - TYPE PRT
     324 < 013 - ORGANISM: Artificial Sequence
     316 -: 120 - FEATURE:
327 -: 123 - OTHER INFORMATION: Description of Artificial Sequence: Synthetic
     329 -: 120 - FEATURE:
     330 1021 NAME THEY: UNSURE
     331 - 1222 LOCATION: (1)..(2)
     331 :123 OTHER INFORMATION: Unsure
     334 -: 220 - FEATURE:
     335 :221 - NAME FEY: UNSURE
     336 :222 - LOCATION: (4)..(7)
                                       JCys is at location 8. Do you mean 9?
     337 :123: OTHER INFORMATION: Unsure
     339 :220: FEATURE
     340 ::221: NAME FEY: UNSURE 341 ::222: LOCATION: (8) 342 ::223: OTHER INFORMATION: Unsure
     344 -:400> SEQUENCE: 23
W--> 345 Xaa Xaa Cys Xaa Xaa Xaa Cys
     346 1
     349 <210: SEQ ID NO: 24
     350 -: 211> LENGTH: 9
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DATE: 10/12/2000

TIME: 18:27:53

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/676,475

Fy I

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

VERIFICATION SUMMARY

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DATE: 10/12/2000

PATENT APPLICATION: US/09/676,475

TIME: 18:27:54

Input Set : A:\LJ4377.app
Output Set: N:\CRF3\10122000\1676475.raw

 $L: 12\ \text{M}: 270\ \text{C}: \ \text{Current Application Number differs. Replaced Application Number}$ L:12 M:270 C: Current Application Number differs, Replaced Application Number differs, Replaced Current Filing Date L:249 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:17 L:252 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:17 L:345 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:17 L:345 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:23 L:363 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:24 L:391 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:25 L:409 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:26 L:453 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:29 L:470 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:30 L:489 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:31 L:470 M:341 W: (46: "n" or "Xaa" used, for SEQ ID#:30
L:489 M:341 W: (46: "n" or "Xaa" used, for SEQ ID#:31
L:4405 M:341 W: (46:) "n" or "Xaa" used, for SEQ ID#:332
L:4584 M:341 W: (46:) "n" or "Xaa" used, for SEQ ID#:335
L:4586 M:341 W: (46:) "n" or "Xaa" used, for SEQ ID#:345
L:4862 M:341 W: (46:) "n" or "Xaa" used, for SEQ ID#:366
L:4880 M:341 W: (46:) "n" or "Xaa" used, for SEQ ID#:366
L:4949 M:341 W: (46:) "n" or "Xaa" used, for SEQ ID#:372
L:5370 M:341 W: (46:) "n" or "Xaa" used, for SEQ ID#:404
L:5731 M:341 W: (46:) "n" or "Xaa" used, for SEQ ID#:431
L:5734 M:341 W: (46:) "n" or "Xaa" used, for SEQ ID#:432
L:5760 M:341 W: (46:) "n" or "Xaa" used, for SEQ ID#:432
L:5778 M:341 W: (46:) "n" or "Xaa" used, for SEQ ID#:432
L:5778 M:341 W: (46:) "n" or "Xaa" used, for SEQ ID#:433
L:5801 M:341 W: (47:) "n" or "Xaa" used, for SEQ ID#:434
L:5804 M:341 W: (47:) "n" or "Xaa" used, for SEQ ID#:434
L:5843 M:341 W: (47:) "n" or "Xaa" used, for SEQ ID#:434
L:5843 M:341 W: (47:) "n" or "Xaa" used, for SEQ ID#:436
L:5843 M:341 W: (46:) "n" or "Xaa" used, for SEQ ID#:436